



14 February 2007

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Mr. Joe Eller  
Bureau of Air Quality  
South Carolina Department of  
Health and Environmental Control  
2600 Bull Street  
Columbia, SC 29201

RE: H<sub>2</sub>SO<sub>4</sub> BACT at Santee Cooper's proposed Pee Dee Generating Station

Dear Mr. Eller:


In response to your request for additional information on sulfuric acid mist emissions from the proposed Pee Dee Generating Station, Santee Cooper proposes to control sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>) emissions at Pee Dee Units 1 and 2 through wet limestone scrubbing and sorbent injection. The combination of the selected BACT control technologies should be able to achieve H<sub>2</sub>SO<sub>4</sub> levels that are much lower than the 3-hour limit of 42.75 lb/hr (equivalent to 0.0075 lb/MMBtu) that Santee Cooper proposed in its original PSD permit application. The exact level of control, however, is uncertain given uncertainties on the amount of SO<sub>2</sub> emissions that is oxidized across the SCR and the control levels that can be achieved by the sorbent injection under the full range of operating conditions. For these reasons, Santee Cooper is proposing to set a BACT H<sub>2</sub>SO<sub>4</sub> limit of 0.005 lb/MMBtu for each Pee Dee Unit, but condition that limit on the Unit being able to achieve consistently that limit during an initial two-year demonstration period. The demonstration period would begin after the process for starting up each Unit is completed and Santee Cooper has conducted the source testing for H<sub>2</sub>SO<sub>4</sub> and other air pollutants, as required under the permit. If the Pee Dee Units are unable to achieve consistently the proposed BACT H<sub>2</sub>SO<sub>4</sub> limit during that demonstration period, Santee Cooper would be provided up to an additional three years to install an alternate control technology to achieve the BACT H<sub>2</sub>SO<sub>4</sub> limit of 0.005 lb/MMBtu at each Pee Dee Unit. Santee Cooper believes that the inclusion of a permit condition for a demonstration period and opportunity to install an alternate control technology is essential given the stringency of the proposed H<sub>2</sub>SO<sub>4</sub> limit. Notably, other recent projects burning coal are proposing BACT H<sub>2</sub>SO<sub>4</sub> limits higher than the proposed limit of 0.005 lb/MMBtu (e.g., 0.075 lb/MMBtu for the Longview Power Project). In addition, the Pee Dee Units will burn eastern bituminous coals with relatively higher sulfur coal than those other coal-fired projects. Suggested permit language is provided below for implementing the proposed approach for demonstrating compliance with BACT H<sub>2</sub>SO<sub>4</sub> limit.

Suggested permit language:

Pee Dee Units 1 and 2 shall evaluate the feasibility of consistently achieving the H<sub>2</sub>SO<sub>4</sub> limit of the 0.005 lb/MMBtu during a two-year demonstration period. In the case of each Unit, Santee Cooper will measure the H<sub>2</sub>SO<sub>4</sub> emissions levels that were achieved during the demonstration period through proper operation of the selected BACT control technologies of wet limestone scrubbing and sorbent injection under the full range of operating conditions. Santee Cooper shall submit to DHEC appropriate information on the H<sub>2</sub>SO<sub>4</sub> control levels achieved at each Unit no later than 30 days after completion of the demonstration period. The demonstration period shall begin on the date that Santee Cooper completes the initial source testing for H<sub>2</sub>SO<sub>4</sub> at each Unit (as provided under this permit) and end two years after the start date of the demonstration period. If the H<sub>2</sub>SO<sub>4</sub> emissions data submitted to DHEC indicates that either Unit was unable to achieve consistently the H<sub>2</sub>SO<sub>4</sub> limit during the demonstration period under the full range of operating conditions, Santee Cooper shall have an additional three years to install and begin operating an alternative control technology on that Unit. Santee Cooper must achieve full compliance with the applicable H<sub>2</sub>SO<sub>4</sub> limit of the 0.005 lb/MMBtu within three years from the end of the demonstration period, as defined above.

If you have any questions or concerns please contact Mr. Kevin Clark at (843) 761-8000 ext. 5193 or [kjclark@santeecooper.com](mailto:kjclark@santeecooper.com).

Sincerely,



Jay Hudson, PE  
Manager  
Environmental Management

<sup>KC</sup>  
JAH:JJM:KJC

Attachment

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